THE NAVAL SAFETY CENTER'S AVIATION MAGAZINE

approach

November 1998

Tragedy Over the Alps—A Swiss FA-18 Mishap

The Perfect Whiteout

Someone's Hiding in That Truck on the Range!

approach contents

November 1998
Volume 43, Number 11

The Naval Safety Center's Aviation Magazine

On the cover: TA-4Js of VT-7. *Photo by Ted Carlson*

RAdm. R.E. Besal — Commander, Naval Safety Center
Bill Mooberry — Executive Director
John G. Mahoney — Head, Media and Education Support
Derek Nelson — Editor-in-Chief
LCdr. Mark Enderson — Head, Aviation Division

Approach Staff
Peter Mersky — Editor
Laurinda Minke — Design and Layout
John W. Williams — Illustrator

Comments and Contributions: Commander, Naval Safety Center
Attn: *Approach*, Code 71
375 A St., Norfolk, VA 23511-4399
(757) 444-3520 Ext. 7245
e-mail: pmersky@safecen.navy.mil

Distribution: Ginger Rives
e-mail: vrives@safecen.navy.mil

Homepage address: www.norfolk.navy.mil/safecen
NAVSAFECEN BBS: (757) 444-7927 DSN 564

Postmaster: Send address changes to *Approach*, Naval Safety Center, 375 A Street, Norfolk, VA 23511-4399.

Approach (ISSN 1094-0405) is published monthly by the Commander, Naval Safety Center, 375 A Street, Norfolk, VA 23511-4399. *Approach* contents should not be considered directive and may not be construed as incriminating under Article 31 of the Uniform Code of Military Justice. Views expressed in guest-written articles are not necessarily those of the Naval Safety Center. *Approach* is available for sale by the Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954. Subscription price: $33 per year. Telephone credit card orders can be made 8 a.m. to 4 p.m. Eastern time at (202) 512-1800. Periodicals postage paid at Norfolk, VA and additional mailing offices.

pg.10

articles

2 **Tragedy Over the Alps**
Lt. Adam Taff
A Navy Hornet driver describes a mishap in Switzerland.

6 **Get the Guy in the Truck!**
Lt. Mark Sivazlian
Not only does this A-6 crew have trouble finding the right target, but when they do, it's occupied!

8 **Nasty Buoys**
Lt. Kevin S. Barker
Eau de lithium is not a popular fragrance with this Seahawk crew.

10 **One Smokin'-Hot Tomcat Break**
Lt. John Jenista
During their landing approach, this F-14 crew has fire and smoke in the cockpit.

13 **Comm Free-for-All**
LCdr. J.D. Haugen
Cluttered airways result when a Prowler crew tries to help a squadronmate with hung gear.

14 **Maybe I Should Declare Emergency Fuel**
Lt. Duane Boren
Waiting to declare an emergency puts this Tomcat crew in an uncomfortable position—and almost in the silk.

16 **The Perfect Whiteout**
Lt. Joseph Mohnacs
Flying in Antarctica has its own special way of building character.

20 **Hypoxic Checkflight**
LCdr. Bob Roth
A PMCF becomes a quick lesson in survival.

23 **I Landed Like This Once Already!**
LCdr. Brian A. Fazzone
He'd made an emergency landing once as a Marine captain, now he was doing another as a Navy O-4.

26 **Wheel-Deep in the Mud**
Cdr. Danny E. Mason
The aircraft was heavy, the runway was wet, and the wind was the wrong way.

30 **Two Wheels and No Gas**
Cdr. Mark Whittle
Losing a wheel on a touch-and-go, this Hornet aviator nearly runs his tanks dry trying to get down.

32 **An Ice Tail**
LCdr. Bill Mosk
Problems with the tail de-icer make an approach more interesting for this P-3 crew.

departments

18 **Bravo Zulu**
- HMM-264(REIN)
- HMM-162 (REIN)
- HSL-46

by Lt. Adam Taff

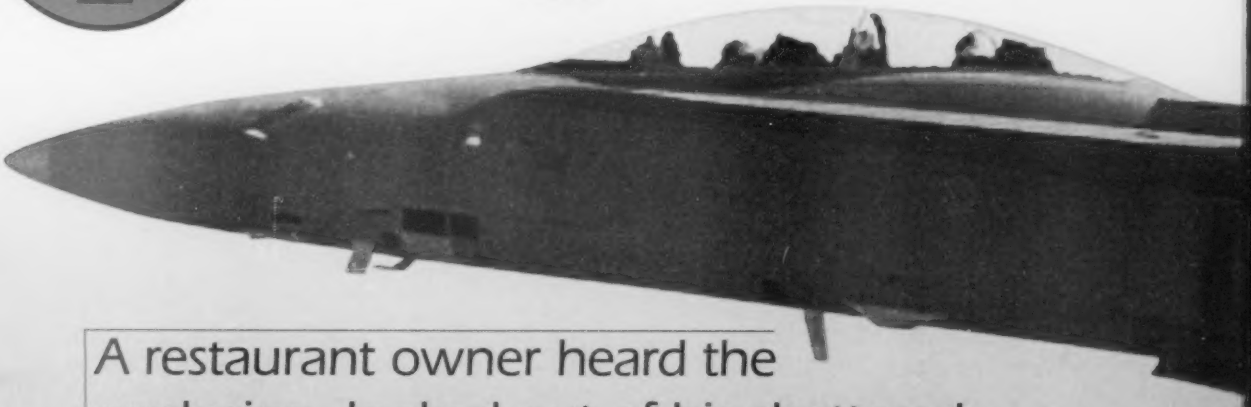
Tragedy Ov

MY ASSIGNMENT AS ONE of two Navy transition instructors with the Swiss Air Force gave me a unique chance to help fellow aviators in another country get to know their new mount, the Lot 18 FA-18 Hornet. But I didn't know that the challenge would include coping with the loss of two new friends.

The Swiss Air Force intercepts and escorts any intruder that violates the country's long-held neutrality. Tactical intercepts in IMC are an essential part of this 24-hour mission.

One day, the weather was completely IFR from 3,000 feet to over 30,000 feet. We were going to practice a 1 v 1 tactical intercept against a potential forward-quarter threat—not an easy mission on a good day. This day, it would prove too hard.

Another American exchange pilot flew the single-seater, while the student—a Swiss major who was a father of four and who had recently completed his basic transition course in the Hornet—flew a two-seat FA-18D. As one of the most experienced



A restaurant owner heard the explosion, looked out of his shattered windows and saw a horrific fireball not more than 200 meters behind him, up the mountain.

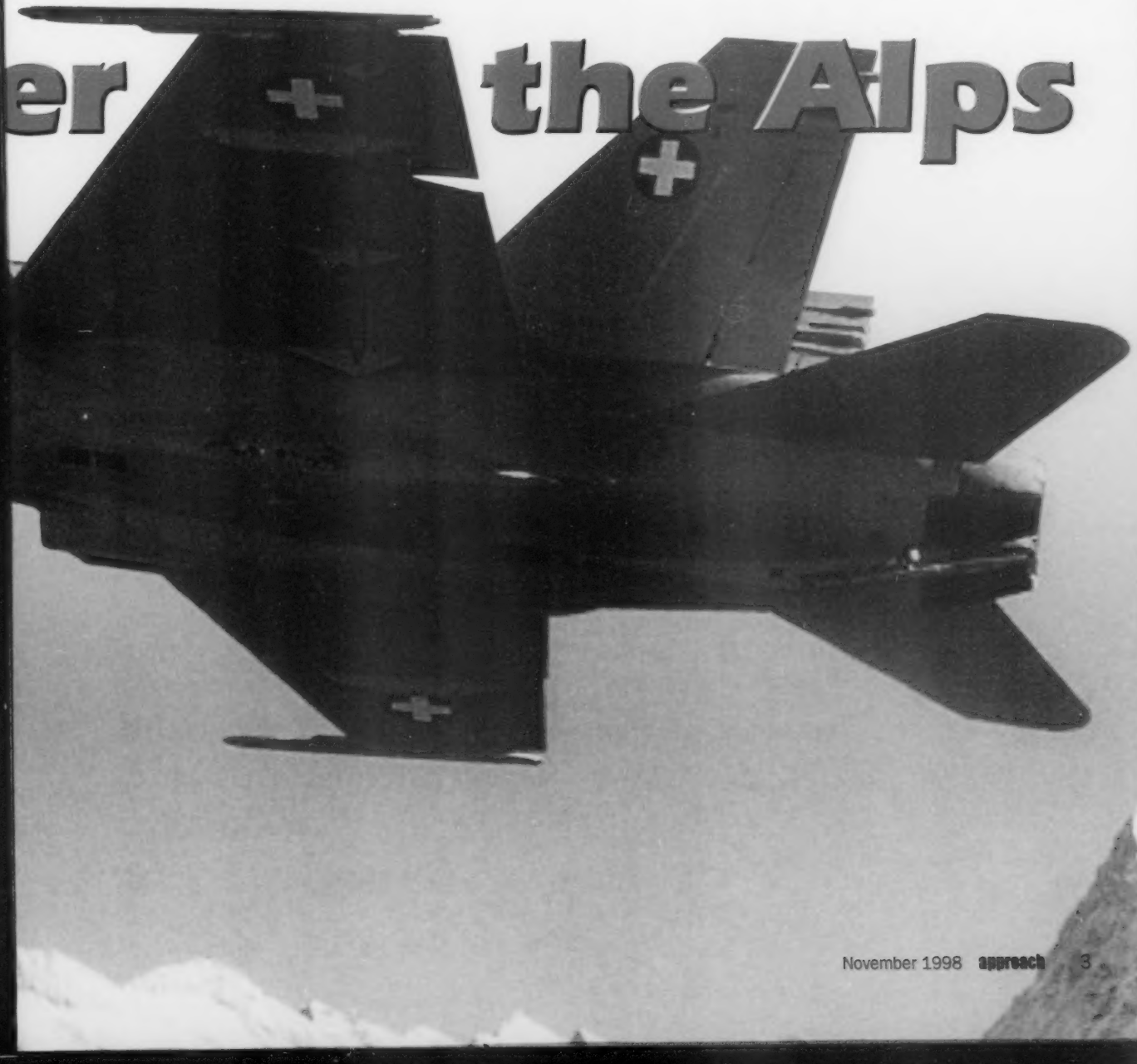
Swiss fighter pilots, he had more than 3,500 hours in tactical aircraft, primarily the French Mirage III. He had just completed a two-week exercise during which he had usually flown twice a day, including night flights. He had about 90 hours in the Hornet.

The mission involved aggressive turns into and away from the bogey aircraft while trying to get into a better position for a kill. Six intercepts would be made. The Swiss pilot would be the fighter for the first three engagements, then bogey for the final three.

We try to fill all open back seats in the two-seater with future Hornet students or fellow tactical pilots. By chance, another young pilot happened to be in the operations center as brief time approached. As a member of the Patrouille Suisse (their equivalent of the Blue Angels), he was an F-5 pilot scheduled to transition to the FA-18 in a few months. When offered the opportunity to get a back-seat ride, he accepted gladly.

The major was in the advanced training phase, so he was scheduled to brief and lead

er the Alps

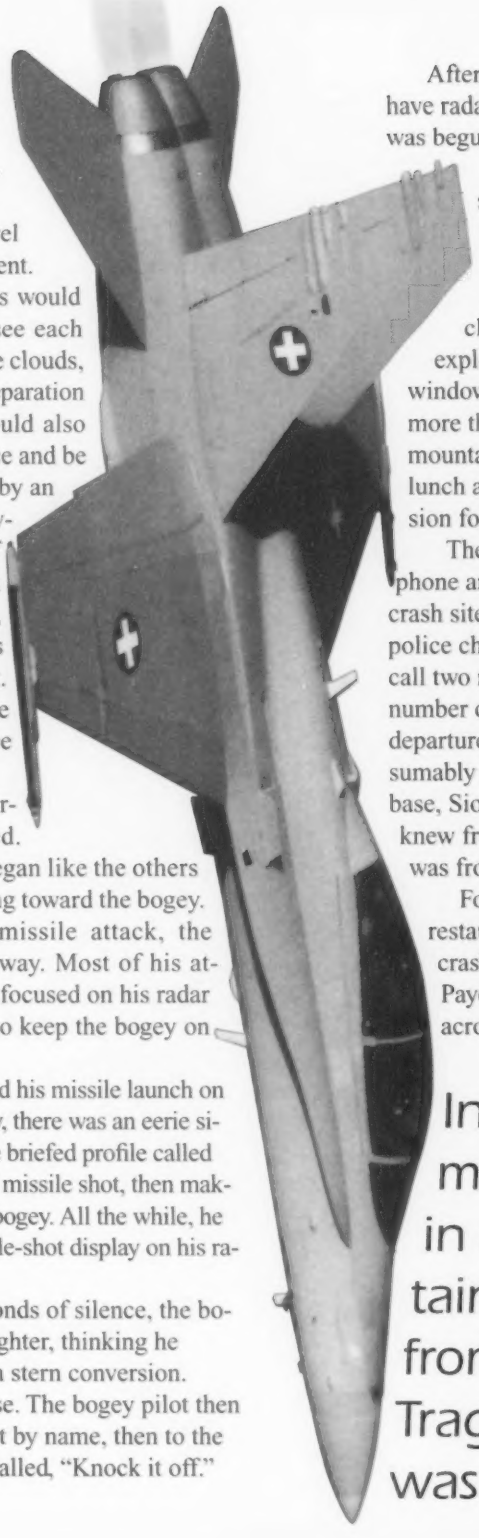


the flight. The news briefed all aspects of the flight, including the procedures for operations in solid IFR. All turns would be level without climb or descent. The two aircraft crews would take off, then never see each other after entering the clouds, maintaining altitude separation at all times. They would also have their own airspace and be controlled, as always, by an AIC. Their airspace covered a region north of the Alps and the Alpen region to the south, where peaks rise as high as 14,000 feet. The minimum altitude for the flight would be 18,000 feet.

The first two intercepts went as briefed. The third intercept began like the others with the fighter turning toward the bogey. After a successful missile attack, the fighter turned hard away. Most of his attention was probably focused on his radar display as he sought to keep the bogey on his scope.

After he announced his missile launch on the common frequency, there was an eerie silence on the radio. The briefed profile called for taking a successful missile shot, then making a safe pass by the bogey. All the while, he would assess his missile-shot display on his radar screen.

After several seconds of silence, the bogey pilot called the fighter, thinking he might be attempting a stern conversion. There was no response. The bogey pilot then called the fighter pilot by name, then to the backseater. He then called, "Knock it off."



After checking with the AIC, who did not have radar contact with the fighter, a SAR was begun.

Fifteen thousand feet below, the skiing village of Crans-Montana had been rocked by a huge explosion. The weather was foggy and damp, right at the base of the clouds. A restaurant owner heard the explosion, looked out of his shattered windows and saw a horrific fireball not more than 200 meters behind him, up the mountain. The Swiss pilot and I had eaten lunch at this restaurant during a ski excursion four months earlier.

The owner quickly grabbed his cellular phone and ran up the steep incline to the crash site. As he climbed, he called the local police chief. The police chief returned his call two minutes later and gave him the number of Payerne Air Base, the Hornet's departure point. The police chief had presumably called the closest air base. That base, Sion, launched a SAR helicopter and knew from the distress call that the aircraft was from Payerne.

Four minutes after the mishap, the restaurant owner was speaking from the crash site to the air-operations center at Payerne, describing debris scattered across the steep mountain slope.

In fact, he pulled more than six G's in a hard, sustained turn away from the bogey. Tragically, the turn was not horizontal...

At Payerne, word spread quickly. The canopy was located a small distance away from the main wreckage, indicating that the pilot had probably tried to eject, and a small amount of hope remained that one of the pilots had somehow survived. But any hope was dashed 24 hours later when both pilots were confirmed killed.

The FA-18 is equipped with a Deployable Flight Incident Recorder Set (DFIRS). When the aircraft goes through more than 20 G's or the pilot ejects, the DFIRS is ejected from the aft portion of the aircraft and parachutes to the ground. This Hornet's DFIRS unit was found close to the crash site and was flown immediately to St. Louis for analysis.

Within days, the analysis from the DFIRS was back in Payerne, the data programmed into a simulated reconstruction of the last minutes of the flight. Air force leaders invited all media in Switzerland to the FA-18 lecture auditorium in Payerne to hear an explanation of the crash. Most Swiss are acutely aware of the FA-18 program, which they voted for in a 1993 national referendum. Media coverage of the mishap was intense.

The media saw a simulation of the flight while the command safety officer and flight surgeon gave the technical and physical explanation. As a Hornet pilot, it was probably the most sobering video I had seen in my life. The pilot pulled left for a shot with about 3 G's in a slight nose-high incline. As he called the shot, he reversed his turn back to the right and began to pull. In fact, he pulled more than six G's in a hard, sustained turn away from the bogey.

Tragically, the turn was not horizontal, but virtually straight down—in full afterburner.

The pilot had severely overbanked, presumably while watching the radar display. The aircraft quickly approached supersonic speed. Descending rapidly at approximately 75 to 80 degrees nose down, and in full afterburner, the pilot suddenly stopped the pull, then brought the power to idle. Obviously, he was badly disoriented, and as he stared at the HUD for corrective information, the dotted green lines and unexpected perverse attitude did not match what his inner ear was telling him.

After a two-second pause, he added military power and continued the pull. The wing safety officer and flight surgeon explained how spatial disorientation can lead to a series of varying flight-control inputs, resulting in a death spiral.

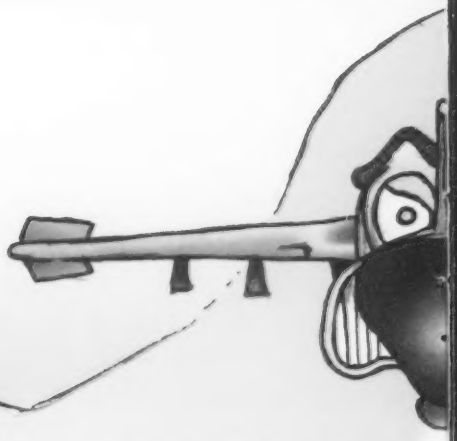
We don't know if the pilot flew with the horizon bar and velocity vector superimposed over the radar display, or whether he tried to use this display to recover from the unusual attitude. The last part of the data showed the Hornet continuing the dive at nearly 600 knots in a 75-degree, nose-low attitude, with almost full-aft stick deflection. One of the pilots ejected approximately one second before the crash.

The subsequent explosion shattered windows far down the mountain. As the simulated flight was replayed repeatedly for the media, the few experienced Hornet pilots with me at the lectern sadly shook their heads. We knew this mishap should not have happened but appreciated how quickly a world in balance could become so terribly disorienting.

The mishap pilot had completed the transition to the Hornet, which is identical to the U.S. syllabus except for the lack of air-to-ground training and, of course, carrier training. The Swiss program manager considered him qualified to brief and fly the mission under the supervision of an instructor.

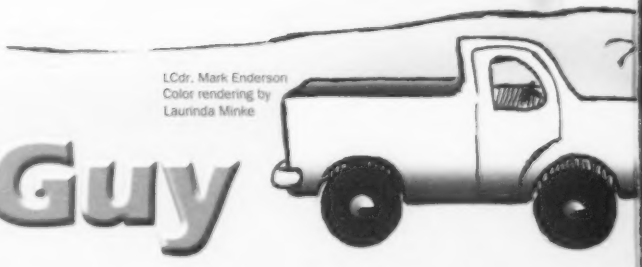
The backseater, although an experienced tactical-jet pilot, had no FA-18 time. As a pilot who was not familiar with the Hornet's HUD, the backseater would probably have been of little help. He probably knew something was wrong but could only watch the much more experienced pilot in the front seat try to solve the problem.

Lt. Taff is helping introduce the Swiss to their FA-18 Hornets.



...we had briefed the
much detail as possi
knowing what the ta

LCdr. Mark Enderson
Color rendering by
Laurinda Minke



Get the Guy

by Lt. Mark Sivazlian

THREE BOMBING RUNS, three direct hits on three wrong targets. On our fourth run, we *really* found the wrong target. But I'm getting ahead of myself. Let me start at the beginning.

The competition in the wing's monthly bombing derby was as strong as ever. My pilot and I were leading a section of A-6Es down to the Yakima Firing Range, each armed with four 1,000-pound bombs. The mission was simulated close air support (CAS) with the derby judges also serving as forward air controllers (FACs). The goal was to score direct hits on a target that the FAC would identify when we checked in.

Yakima Range Control passed us off to the FAC. Before the hop, we had briefed the target area in as much detail as possible, without actually knowing what the target would be. CAS is a very dynamic and difficult mission that requires quick thinking and flexibility. You have to watch out for your wingman and the "friendlies" on deck.

The FAC sent us to our holding point and then gave us our 12-line brief. He described our target as a "dumpster in the open." We were allowed one dry run to survey the target area. As we flew into the target area, it became obvious that there were several targets that fit the FAC's description.

"Which one is it?" I asked my pilot. He shook his head and said, "I have no idea."

We told the FAC that we hadn't yet identified the target and asked for a more detailed description during his "talk on" during the first hot run.

The FAC set us up on our run, and we dropped our first bomb.

"One thousand meters at six o'clock," the FAC reported. "You hit what you were aiming for, but the actual target is on the next ridge."

Our next drop was also a direct hit, but again, it was on the wrong dumpster. I called my wingman; he was as confused as I was. Our third run ended up being a replay of the first two. At this point, we had made three hot runs, hit the "target" each time, but had failed to score a hit.

I knew the front office was not going to be

e target area in as
ble, without actually
rget would be.

in the Truck!

Then I saw it and so did my pilot. It was white and looked newer than the rest. It made sense—a new target for the bombing derby.

"You're cleared hot!" My pilot sweetened his solution on the white dumpster, when suddenly I saw a portion of it move, followed by a person climbing out of it. It dawned on me that this wasn't a dumpster after all. It was a truck!

"Don't pickle! Don't pickle!" I yelled as I reached over to turn off the Master Arm switch. The figure was now on a dead run away from the "target", as we flew over it.

"Off target, no drop," my pilot radioed to the FAC.

Afterward, talking it over with the FAC, we learned that the individual in the truck had actually been an onlooker. The FAC hadn't seen him, and he was certainly not authorized to be in the area.

Given the fact that we were carrying heavy ordnance and hitting everything that was passed to us, he was lucky that he jumped out of the truck when he did. If we had dropped as directed, there's a good chance that he could have been killed.

Just like combat, you have to be constantly flexible, even during a training hop. We managed to escape tunnel vision and consequently, save someone from death by "friendly fire."

At the time of the incident, Lt. Sivazlian flew with VA-165. He now flies with VXE-6.

By the way, if the guy in the truck would like to send us his story, we'll print it.—Ed.

happy. We were becoming increasingly frustrated and anxious. We had to redeem ourselves.

On our next and final hot run, we once again listened to the FAC's voice as he guided us on target.

"OK, roll left. Good. Maintain heading. Come a little more left."

I began our pre-drop.

"Station selected, quantity of one. Master Arm is on. Your pickle is hot." I glanced at the instruments and up at my pilot. He was focusing his attention outside, scanning the multitude of target-sized dots on the ground, trying to find ours.

"OK, Dash One," the FAC called, "you're looking good. Target is the dumpster on the hill at your twelve o'clock."

Nasty Buoys

I started getting a headache from the fumes, and we noticed a rusty, metallic taste in our mouths. This led us to believe that one of the sonobuoy lithium batteries was venting...

by Lt. Kevin S. Barker

WE WERE UP AT 0300 FOR A 0500 launch on what had become an excruciatingly mundane mission: an SSC patrol in the Northern Arabian Gulf, identifying and checking out suspect vessels moving in and out of Iraqi ports. We had been in the gulf for several weeks during the hottest part of the summer, baking in temperatures above 120 degrees F and sweating in humidity of more than 90 percent, even late at night. A truly inhospitable flying environment for a helicopter.

The preflight, brief, and first part of the patrol were the usual sweat-ex. Then I started noticing an odor like burning wires in the cockpit. During every NATOPS brief we say, "If anything doesn't look, sound, smell, or feel right, speak up." I thought of this admonition even though we were maneuvering in very tight airspace, while contending with an ATC controller who had a heavy accent on the radio as well as with the ASTAC on HAWK.

I said, "Hey, do you guys smell that?" At about the same time, the rest of the crew noticed the odor. We discussed the possible causes and set out to determine its source. I was the ATO for this hop, so the AW and I did the troubleshooting while the pilot at the controls kept his head out of the cockpit, kept us out of territorial airspace, and handled the radios.

We originally suspected an electrical fire of unknown origin, but while checking all electronic equipment and finding nothing, we noticed the smell came and went as we maneuvered the aircraft. I started getting a headache from the fumes, and we noticed a rusty, metallic taste in our mouths. This led us to believe that one of the sonobuoy lithium batteries was venting, but NATOPS says they give off sulfur dioxide gas when they vent, and there was no trace of a "rotten egg" smell. Still suspecting the sonobuoys, we had the AW check them and discovered

that when we went into a turn the pungent odor got stronger, and was, indeed, coming from the area of the sonobuoy launcher.

We then ventilated the cabin and broke out the pocket checklist. The EP for "sonobuoy lithium battery venting" says to jettison all buoys, but we also had chaff rounds in the launcher so we couldn't just press the "jettison all stores" button.

After setting up to launch the buoys one at a time, we realized that we had another problem: We were surrounded by fishing boats, and were not far enough out to sea to launch the buoys. This may not sound like a big deal but NATOPS warns that exposure to gases from a venting buoy, even in low concentrations, can make it hard to breathe and make you black out. We decided to follow the "smoke and fume elimination" procedures.

We bustered to a clear area we found on radar, stipulating that if anyone started feeling dizzy, lightheaded or nauseated, we would immediately jettison the buoys. When we reached the clear area, we launched the buoys and the smell disappeared.

After the mission, we discussed what had happened. I realized that we had done everything exactly the way we were supposed to. We learn seven skills in Aircrew Coordination Training. I used to sit through required annual ACT classes and wonder how I was suppose to remember all this stuff during an emergency and put it to work, but we had done the steps without even consciously thinking about them.

The first skills we had used were assertiveness and communication. We flew as we had briefed and spoke up when we detected an unusual odor. We talked with each other, with the ATC controller and the ASTAC. It is sometimes difficult for us to speak up because we fear being wrong or don't want to seem over-anxious, especially if we're junior H2Ps and aircrewmen. Had we not said something, more serious problems could have resulted—like everyone in the aircraft becoming unconscious.

We all gave our opinions as to the cause of the odor. Next, the pilot at the controls, who was the HAC, used leadership and mission analysis to coordinate and monitor the crew during the troubleshooting process.

He also maintained his situational awareness, keeping his head out of the cockpit and flying the aircraft. After checking out every possibility, we made decisions. Based on the available information, we decided the sonobuoys caused the odor and acted accordingly.

Because we couldn't get rid of the buoys and our chaff rounds by jettisoning all stores, adaptability and flexibility came into play; we had to devise an alternate plan.

When all was said and done, we had used aircrew coordination to its fullest and were able to complete our mission.

Lt. Barker flies with HSL-44.

Nasty Buoys

I started getting a headache from the fumes, and we noticed a rusty, metallic taste in our mouths. This led us to believe that one of the sonobuoy lithium batteries was venting...

by Lt. Kevin S. Barker

WE WERE UP AT 0300 FOR A 0500 launch on what had become an excruciatingly mundane mission: an SSC patrol in the Northern Arabian Gulf, identifying and checking out suspect vessels moving in and out of Iraqi ports. We had been in the gulf for several weeks during the hottest part of the summer, baking in temperatures above 120 degrees F and sweating in humidity of more than 90 percent, even late at night. A truly inhospitable flying environment for a helicopter.

The preflight, brief, and first part of the patrol were the usual sweat-ex. Then I started noticing an odor like burning wires in the cockpit. During every NATOPS brief we say, "If anything doesn't look, sound, smell, or feel right, speak up." I thought of this admonition even though we were maneuvering in very tight airspace, while contending with an ATC controller who had a heavy accent on the radio as well as with the ASTAC on HAWK.

I said, "Hey, do you guys smell that?" At about the same time, the rest of the crew noticed the odor. We discussed the possible causes and set out to determine its source. I was the ATO for this hop, so the AW and I did the troubleshooting while the pilot at the controls kept his head out of the cockpit, kept us out of territorial airspace, and handled the radios.

We originally suspected an electrical fire of unknown origin, but while checking all electronic equipment and finding nothing, we noticed the smell came and went as we maneuvered the aircraft. I started getting a headache from the fumes, and we noticed a rusty, metallic taste in our mouths. This led us to believe that one of the sonobuoy lithium batteries was venting, but NATOPS says they give off sulfur dioxide gas when they vent, and there was no trace of a "rotten egg" smell. Still suspecting the sonobuoys, we had the AW check them and discovered

that when we went into a turn the pungent odor got stronger, and was, indeed, coming from the area of the sonobuoy launcher.

We then ventilated the cabin and broke out the pocket checklist. The EP for "sonobuoy lithium battery venting" says to jettison all buoys, but we also had chaff rounds in the launcher so we couldn't just press the "jettison all stores" button.

After setting up to launch the buoys one at a time, we realized that we had another problem: We were surrounded by fishing boats, and were not far enough out to sea to launch the buoys. This may not sound like a big deal but NATOPS warns that exposure to gases from a venting buoy, even in low concentrations, can make it hard to breathe and make you black out. We decided to follow the "smoke and fume elimination" procedures.

We bustered to a clear area we found on radar, stipulating that if anyone started feeling dizzy, lightheaded or nauseated, we would immediately jettison the buoys. When we reached the clear area, we launched the buoys and the smell disappeared.

After the mission, we discussed what had happened. I realized that we had done everything exactly the way we were supposed to. We learn seven skills in Aircrew Coordination Training. I used to sit through required annual ACT classes and wonder how I was suppose to remember all this stuff during an emergency and put it to work, but we had done the steps without even consciously thinking about them.

The first skills we had used were assertiveness and communication. We flew as we had briefed and spoke up when we detected an unusual odor. We talked with each other, with the ATC controller and the ASTAC. It is sometimes difficult for us to speak up because we fear being wrong or don't want to seem over-anxious, especially if we're junior H2Ps and aircrewmen. Had we not said something, more serious problems could have resulted—like everyone in the aircraft becoming unconscious.

We all gave our opinions as to the cause of the odor. Next, the pilot at the controls, who was the HAC, used leadership and mission analysis to coordinate and monitor the crew during the troubleshooting process.

He also maintained his situational awareness, keeping his head out of the cockpit and flying the aircraft. After checking out every possibility, we made decisions. Based on the available information, we decided the sonobuoys caused the odor and acted accordingly.

Because we couldn't get rid of the buoys and our chaff rounds by jettisoning all stores, adaptability and flexibility came into play; we had to devise an alternate plan.

When all was said and done, we had used aircrew coordination to its fullest and were able to complete our mission.

Lt. Barker flies with HSL-44.

Oi
Smoki

Tomcat

by Lt. John Jenista

THE HOP WAS A FAM 1 for a fleet pilot transitioning from the F-14B to the F-14A. The syllabus requires two flights with an FRS RIO instructor. The first flight is a 1 v 0 performance demo. After an uneventful flight, we were inside the initial for the break to do touch-and-goes.

As we approached the numbers, we were pushing the Pratt & Whitney TF-30s to get some nice vapes out of the break. I called, "Numbers," to tower, and they cleared us for a break midfield. We rolled into the break, and my scan shifted from forward to left inside the turn. I expected to see massive trails over the wing as we pulled up to 6.5 G's. But the atmospheric conditions wouldn't cooperate.

We were pulling hard about 90 degrees through the turn when the vapes started forming *inside* the cockpit. Out of the corner of my eye, I saw smoke behind me to the left. I looked down at the left circuit-breaker panel to see thick clouds of dense black and gray smoke pouring from between No. 1 and No. 2 panels. In no time, the entire left side of the rear cockpit was full of smoke, which billowed forward to the front seat.

Before I could get on the ICS, four circuit breakers on the No. 1 panel exploded in a shower of sparks. Over the roar of the typical Grumman ECS hurricane, and through the sound suppression of my helmet, I heard the popping electrical fire zapping and belching sparks behind my left arm. A stream of sparks shot forward and bounced off the AWG-15 armament panel, landing everywhere on the left console. I couldn't

ne n'-Hot

t Break

believe how fast it all happened.

I finally said, "We've got a fire back here. The left, number one circuit breaker panel is on fire!" By that time, we were slowing down and almost through 180 degrees of turn.

My call must have come as a real shock to my pilot (pun intended) as he quickly snapped the wings level, shot a glance at me in his mirror and replied in disbelief, "You have a *fire* back there?"

Smoke was getting thick in the front cockpit, and he asked, "Do you wanna stay with it?" I guess any time someone says you're on fire, the next thing that goes through your mind is ejecting.

He had no idea how big the fire was, except for what I told him. The smoke in his cockpit was getting worse.

I quickly said, "Yeah, we're going to stay with it, repeat *stay* with the aircraft. Let's go through the electrical-fire boldface."

Then, I called tower. "Gunslinger Four Twenty-One is declaring an emergency. We've got a fire in the cockpit."

My pilot recited the boldface procedures over the ICS as he secured the left and right generators. Immediately, the shower of sparks stopped and the left circuit-breaker panel returned to billowing clouds of black smoke.

I keyed the mike again to tell tower we were landing on the left runway and needed number-one priority. As I made the call, I heard no side tone through my earphones. My first reaction was that we had lost the

O
Smoki

Tomcat

by Lt. John Jenista

THE HOP WAS A FAM 1 for a fleet pilot transitioning from the F-14B to the F-14A. The syllabus requires two flights with an FRS RIO instructor. The first flight is a 1 v 0 performance demo. After an uneventful flight, we were inside the initial for the break to do touch-and-goes.

As we approached the numbers, we were pushing the Pratt & Whitney TF-30s to get some nice vapes out of the break. I called, "Numbers," to tower, and they cleared us for a break midfield. We rolled into the break, and my scan shifted from forward to left inside the turn. I expected to see massive trails over the wing as we pulled up to 6.5 G's. But the atmospheric conditions wouldn't cooperate.

We were pulling hard about 90 degrees through the turn when the vapes started forming *inside* the cockpit. Out of the corner of my eye, I saw smoke behind me to the left. I looked down at the left circuit-breaker panel to see thick clouds of dense black and gray smoke pouring from between No. 1 and No. 2 panels. In no time, the entire left side of the rear cockpit was full of smoke, which billowed forward to the front seat.

Before I could get on the ICS, four circuit breakers on the No. 1 panel exploded in a shower of sparks. Over the roar of the typical Grumman ECS hurricane, and through the sound suppression of my helmet, I heard the popping electrical fire zapping and belching sparks behind my left arm. A stream of sparks shot forward and bounced off the AWG-15 armament panel, landing everywhere on the left console. I couldn't

ne
n'-Hot

t Break

believe how fast it all happened.

I finally said, "We've got a fire back here. The left, number one circuit breaker panel is on fire!" By that time, we were slowing down and almost through 180 degrees of turn.

My call must have come as a real shock to my pilot (pun intended) as he quickly snapped the wings level, shot a glance at me in his mirror and replied in disbelief, "You have a *fire* back there?"

Smoke was getting thick in the front cockpit, and he asked, "Do you wanna stay with it?" I guess any time someone says you're on fire, the next thing that goes through your mind is ejecting.

He had no idea how big the fire was, except for what I told him. The smoke in his cockpit was getting worse.

I quickly said, "Yeah, we're going to stay with it, repeat *stay* with the aircraft. Let's go through the electrical-fire boldface."

Then, I called tower. "Gunslinger Four Twenty-One is declaring an emergency. We've got a fire in the cockpit."

My pilot recited the boldface procedures over the ICS as he secured the left and right generators. Immediately, the shower of sparks stopped and the left circuit-breaker panel returned to billowing clouds of black smoke.

I keyed the mike again to tell tower we were landing on the left runway and needed number-one priority. As I made the call, I heard no side tone through my earphones. My first reaction was that we had lost the

I looked down to see yellow flames from several of the plastic CBs burning and molten plastic dripping down the face of the No.1 panel.

radios because of the fire.

There was a lot of smoke in the cockpit still coming from the CB panel. I looked down to see yellow flames from several of the plastic CBs burning and molten plastic dripping down the face of the No. 1 panel. With my gloved hand, I easily batted the fire out. I was glad I wore my gloves so religiously. I have heard too many stories of other folks who didn't wear them and wished they had.

The cockpit was beginning to clear, and my pilot said he had also finished the boldface for eliminating smoke and fumes. I could also hear the emergency generator running and remembered that UHF 2 was not available on the emergency generator in the 1 KVA mode. I asked my pilot to switch to button 4 in the front so we could call the tower again. We continued our approach, and my pilot got the plane ready for landing by the ninety. He also finished the landing checklist on the ICS.

As we rolled out on final for the left runway, a steady, green light shone from the tower. They must have deduced we were NORDO. Tower had tried to reach us after our first call about the fire in the cockpit, but we lost our radios when we secured the generators. We then briefed the landing. We decided to take a trap and then get out *without* blowing the canopy. I couldn't see any fire on the outside of the CB panel, but I wasn't too sure of what was burning behind the panel. The CBs were still smoking. If it was still on fire, I didn't want to be in this aircraft any longer than necessary. I didn't want to needlessly blow the canopy in case the fire was out. I said I would get out on the left intake ramp and down over the horizontal stabilizer while my pilot followed.

Just before crossing the numbers, I shut down everything in the back cockpit. The hook came down as I transmitted on UHF 1, "Gunslinger Four Twenty-One on final for a trap on two four left."

Tower cleared us for the trap. We touched down and snagged the short-field gear. As the arresting gear slowed us, the pilot called the right motor coming off. The Tomcat came to a stop, and we shut down the left motor.

"Safe your seat," I called, "top and bottom. Clear canopy."

As the canopy came up, I unstrapped and was out of the cockpit in seconds with my pilot right behind me.

We had gone through three different emergencies and never once broke out the PCL. There wasn't time—90 seconds after the fire started, we were rolling out.

You have to know your emergency procedures cold and have a good understanding of NATOPS without having to refer to the PCL for non-boldface procedures. Our crew coordination paid off as well.

Lt. Jenista was an instructor with VF-124 and VF-101, and flew with VF-11. He is currently assigned to VF-2.

Comm Free-for-All

by LCdr. J.D. Haugen

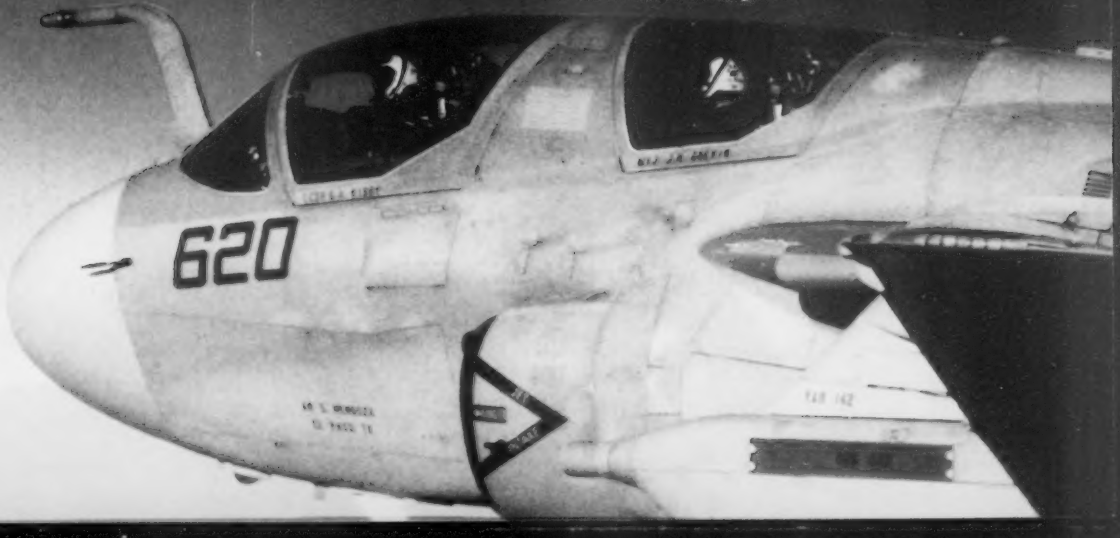
WITH CRUISE LESS THAN A WEEK AWAY, we focused on the few remaining FCLP periods. As we started up for some night bounces, we heard that one of our jets was coming back with a gear-up indication. No big deal. Lowering the gear should quickly fix that problem. Minutes later, as we launched into the night, we got the bad news: They now had an incomplete gear-down indication. We quickly agreed to join up and check them out, thinking it was simply a faulty indicator problem.

To everyone's dismay, the shadow where the right main should have been hanging was conspicuously missing. Things were tense for the next 15 minutes.

Before going any further, I have to explain that for the Prowler, "Gear Handle Down Indicates Unsafe" is one of our most challenging emergency checklists. The steps, notes and cautions cover five pages, with a separate page of 19 steps reserved for when procedures on the first five pages fail to lower the hung gear. As we stared in disbelief at the missing gear, my right-seater quickly asked if they had tried blowing the gear down, which succeeds in most simulations of this problem. We didn't have the checklist out at the time, but I realized that we were probably jumping the gun.

Looking back, I can see our inquiry skipped right to the second-to-last step in the checklist. A curt "Stand by" was more than we deserved from our squadronmates as they continued to troubleshoot their predicament. Unfortunately, a lot more people were eager to get involved, but few could provide anything more valuable than the distraction we had just thrown out.

Continued on pg. 29



Maybe I Should Declare Em

by Lt. Duane Boren

SIX WEEKS OUT OF THE FRS, I was with my first fleet squadron at the start of a COMPTUEX. After a few FCLPs, they sent me to the boat. I wanted to bounce a little more, but the squadron had a tight deadline. Besides, with 10 day traps and six night traps in the F-14, I was ready.

The weather that morning started out below minimums. We waited patiently for it to clear. The fog gradually dissipated, and by 1100, conditions were better than 200 feet and half a mile. The forecast was for 600 and 2. The ship was reporting below minimums, but hoping to find clear air eventually.

We launched and flew 200 miles out to sea, hoping we'd find mother in the clear. No such luck. She was still in the fog. We marshaled for about 20 minutes while the carrier kept searching.

CATC finally called us down with instructions to turn on our taxi light to help the LSOs see us. At three-quarters of a mile, we were still in the goo, and I called, "Clara," when told to call the ball. Then we heard, "Paddles contact. Keep it coming. You're on glide slope."

He kept giving me sugar calls, and we broke out at 200 feet. I made one quick lineup correction and called the ball. But right after that, I saw the red waveoff lights.

Apparently, Paddles didn't like that correction, or the ones for the next three passes. He waved me off every time! After my fourth pass, I was bingo. My RIO and I were ready for this situation; we knew where to turn and what our bingo profile to North Island was.

About 35 miles from North Island, we decided we had enough fuel to land without declaring an emergency. We told approach we were minimum fuel. Approach vectored us to an eight-mile final for a GCA to runway 36 while we continued our slow descent. After another quick calculation, we figured we would be on deck just above emergency fuel state. Everything was looking great—but not for long.

Approach vectored us farther south for a 12-mile final, saying we would be following an S-3. We reluctantly complied but reminded them we were minimum fuel. The controller told us to dirty up early because

ergency Fuel

we were closing the S-3. I dropped the flaps and slowed to approach speed. I kept the gear up, however, to save fuel.

At five miles, I dropped the gear, completed the landing checks, then began our GCA descent. Meanwhile, the left low-fuel light lit up. Looking at our fuel again, we realized we would land just below emergency fuel. We decided not to declare emergency fuel now because we would be on deck in two minutes. We broke out of the clouds at 500 feet and just inside two miles as the S-3 blew a tire, FODing the runway. Now, the right low-fuel light came on.

We declared emergency fuel with 15 minutes remaining. Approach told us to climb to 1,200 feet and vectored us to a short final for runway 10. We cleaned up and climbed, pimping approach for a five-mile final. They gave us a three-mile final. Still at 1,200 feet, I dropped the gear and flaps, and started to descend—now at 2.5 miles—confident we would break out between 400 and 500 feet. Just below 500 feet, we saw the runway, made a quick descent, and landed 15 knots above on-speed.

After pulling off the runway, I looked at the fuel gauge. It showed 1,000 pounds total fuel—enough to get the Turkey one more approach, assuming the gauges were correct. (Tomcat drivers can appreciate the accuracy of the fuel dials.)

I gathered two pearls of wisdom from my first experience as a fleet pilot. First, don't hesitate to declare an emergency. As far as I know, you don't have to fill out large amounts of paperwork, and the FAA doesn't interrogate you.

I should have declared an emergency when I first contacted approach. If not then, I definitely should have told them when they vectored another aircraft in front of me.

The second lesson is to be directive with approach. I should have descended earlier than I did on my final approach, but I got sidetracked on other matters and expected approach to give us the descent. They got sidetracked, too, and didn't. Simply telling them my intentions and carrying them out earlier would have made my final pass less aggressive.

Lt. Boren flies with VF-2.

The Perfect Whiteout

by Lt. Joseph Mohnacs

To say the weather in Antarctica this past season was challenging would be a serious understatement. Whether by an act of God, coincidence, or the result of El Niño, conditions all over the continent were reportedly the worst in 25 years. Consequently, our two veteran polar aircrews experienced the most challenging and unique aspect of polar region flying—a whiteout landing.

On that morning, I was the aircraft commander for one of two squadron LC-130s inbound to McMurdo Station's Williams (Willy) Field. We had just made a fuel-tanker run to the South Pole. Loaded with only a handful of returning passengers, we were just 30 minutes out from Willy. The other Herc, also loaded with passengers and near Willy, had just flown a 2,000-mile open-water transit from Christchurch, New Zealand.

During both the outbound and return phases of our trip to the pole, we had carefully monitored reported and forecast weather conditions back at Willy. The weather in Antarctica changes at the drop of a hat, and we constantly checked observations and forecasts to make timely decisions to divert. Divert options are limited at best, and they are very far away. On this flight, the weather had been steadily reported as 300 feet, broken, with unrestricted visibility. However, upon starting our descent into the terminal area, ATC advised us that visibility had just dropped to one-quarter mile in fog.

At first, this did not seem to be a big concern, since only a few days earlier, we had received a similar report and had still managed to get in. An auxiliary field named Pegasus was only seven miles from Willy,

and it usually had better weather.

Passing over Minna Bluff, a mountainous region approximately 50 miles south of Willy, I got my first look at the massive fog bank that had enveloped the Ross Ice Shelf, on which Willy Field and Pegasus sit. It looked as if Mother Nature had taken a giant roll of dense, fluffy cotton and stretched it as far as the eye could see. It did not appear that this stuff was going to lift anytime soon.

Borrowing a line from the classic movie "Airplane," I radioed the other aircraft's commander, saying, "It looks like I picked a bad week to stop drinking."

With fuel and divert options now severely limited, I reasoned that we stood a very good chance of having to make a whiteout landing. A whiteout landing is considered an emergency and is discussed as such in Section V of the LC-130 NATOPS. It's like flying a ditching profile, except that the water is frozen. I radioed our duty office to tell them to start preparing to mobilize the SAR team.

As we neared the field, base reported visibility was now one-eighth of a mile with surface and horizon definitions nil and nil. We requested the PAR to skiway 25 expecting to go missed approach; at least we would get to see how bad it really was.

At about 500 feet on final, we entered the fog and continued down to our decision height of 100 feet AGL. Nothing. We couldn't see a thing. We waved off and entered holding above the field to talk to the other aircraft about a plan for simultaneous whiteout landings and to brief our approach.

The whiteout landing area is an unprepared snowfield defined off the local tacan and surveyed for crevasses. It is not groomed or marked, but generally smooth enough to allow a Herc to land on skis. The problem would be drifting snow, as we had recently received quite a bit of it. In the open field, an LC-130 can list much like a boat, and the potential for a prop strike can be high. With visibility down, it would also be tough to see another aircraft. We decided to divide the area into separate sectors and remain clear of the other aircraft.

Satisfied with our plan, we called ATC for one more PAR attempt and once again descended into the fog. The outcome was the same as the first, so we climbed to 300 feet AGL on the missed approach and proceeded to the whiteout area. Once we had the aircraft stabilized, we began our descent at the prescribed 200 fpm and 120 KIAS. All the time on the way down I kept saying to myself, "Wings level, wings level, wings level…"

We entered ground effect just before touchdown. I was concentrating on the instruments when I felt the Herc shudder as its skis finally touched down. Only after bringing the aircraft to a stop could I look up and outside. It looked exactly the way it did at 300 feet in the soup. Visibility back at the field was now reported as one-sixteenth of a mile. Taxiing would be out of the question. We radioed our duty office that we were safe on deck, and then passed on words of advice and encouragement to our squadronmates in trail. They made it down safely, landing approximately seven miles from us.

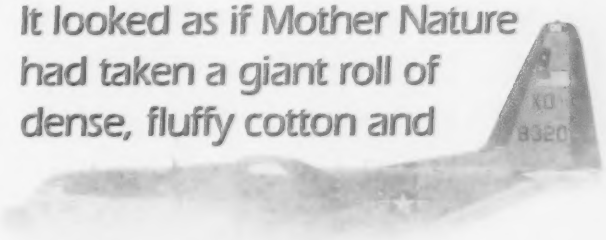
Now all we had to do was to wait for the SAR team to arrive. It would be another six hours until we were all back to the relative comforts of McMurdo.

This was the first time in my nine-year career that I had landed an aircraft without seeing the ground after starting the approach. It's not the kind of thing you'd do voluntarily.

Lt. Mohnacs flew with VXE-6 at the time of this incident.

Lt. J.D. Washburn, the other LC-130 aircraft commander, contributed to this article.

It looked as if Mother Nature had taken a giant roll of dense, fluffy cotton and stretched it as far as the eye could see.



Photos by PH1 Edward G. Martens

BRAZulu

BZs require an endorsement from the nominating squadron's CO and the appropriate CAG, wing commander or MAG commander. In the case of helo dets, the CO of the ship will suffice. A squadron zapper and a 5-by-7-inch photo of the entire crew should accompany the BZ nomination. Please include a squadron telephone number so we can call with questions.

Cpl. Michael Hinebaugh
Maj. Mark Clark
Capt. Carl Wingo
Sgt. Jason Wargo
LCpl. Christopher Barr

HMM-264 (REIN)

The crew of Leroy 23, a CH-53E, launched at night from the island of Vieques during JTFEX-98 as part of 26 MEU's Special Operations Capable qualification. Their mission was NVG aerial refueling followed by an NVG gun-shoot.

Capt. Wingo, the copilot, flew the climb-out, rendezvous and joinup with a KC-130. He successfully plugged and began receiving fuel. Soon afterward, fuel vapors engulfed the cabin and cockpit. Sgt. Wargo and Cpl. Hinebaugh, the two crew chiefs, and LCpl. Barr, the aerial observer, found fuel pouring from the cabin overhead. The fuel flooded into the aircraft and onto the .50-caliber machine guns and live ammunition. Sgt. Wargo advised the HAC, Maj. Clark, of the fuel spill and shut off the fuel-flow refueling switches. He also recommended an immediate breakaway from the tanker.

Capt. Wingo made the breakaway and headed back toward Vieques.

The two pilots and Sgt. Wargo went through the post-aerial-refueling and landing checklists. Cpl. Hinebaugh and LCpl. Barr prepared the cabin for landing by quickly removing the ammunition and weapons to clean areas. They contained the fuel leak using bundles of rags and towels.

Using NVGs, Maj. Clark landed on the island's small, unlit runway, where ordnance and maintenance troops came out to meet the aircraft. They removed the weapons and ammunition and checked the fuel leak. QA representatives later attributed the leak to a faulty HIFR valve.

HMM-162 (REIN)

The crew of YS 37 was Dash 2 in a section of UH-1Ns. En route to their ship, a torque split occurred, which increased when power was applied.

Ten miles from the ship, the split grew, and the No. 2 engine eventually shut itself down.

Capt. Smith, the pilot at the controls, immediately stabilized at single-engine airspeed and headed toward MCALF Bogue Field, seven miles away. Capt. Dorman provided information on the remaining engine indications and navigation to Capt. Smith. The crew in the lead Huey also provided navigational information as they accompanied the distressed aircraft.

A single AH-1W, also en route to the ship, flew ahead to ensure that the arresting gear was not in battery at Bogue.

As Cpl. Timms prepared the cabin for landing and provided important glideslope information, the pilots set up for a long, shallow descent and made a slide-on landing.

Trouble shooters diagnosed the problem as a faulty fuel-control cluster. The mechs replaced the cluster, and the crew tested the aircraft in time to fly out to the ship later that afternoon.

HSL-46

Cutlass 476 was over southern Georgia on an IFR flight plan from Mayport to Panama City. The SH-60B was at 5,000 feet AGL, in and out of clouds, when AW2 Woods felt a slight vibration in the cabin.

As the crew discussed the problem, the vibrations intensified to the point where they had difficulty reading the instruments. They quickly determined the vibration was coming from the main-blade dampers.

The HAC, Lt. Futch, called ATC, declaring an emergency and requested vectors to the nearest airfield. Lt. Lohman, the copilot, reviewed emergency procedures and plotted a course for the suggested divert.

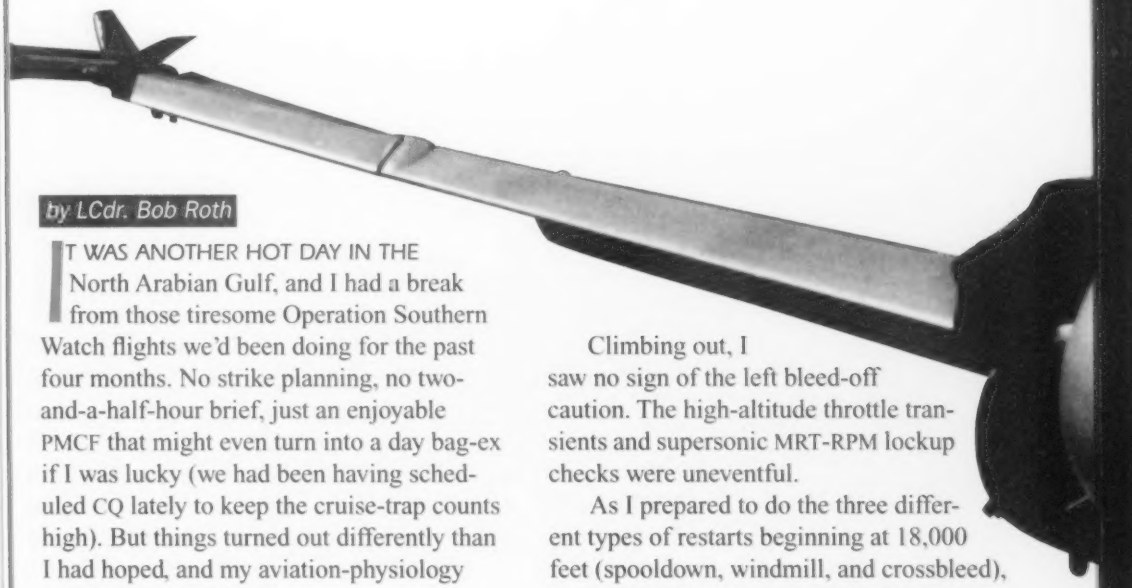
Following NATOPS, Lt. Futch slowed to 80 knots to reduce the vibrations. The speed reduction actually increased the shaking, however. Adjusting their airspeed, the crew finally arrived at 55-60 knots, which seemed to smooth the aircraft out as ATC vectored the Seahawk to Waycross Airport, 10 miles away.

As they began their descent in IMC, the vibrations started again and continued until the crew landed.

Now, with no load on the rotor, the helicopter started shaking violently in ground resonance. The crew immediately secured the engines, then held on as the rotors coasted to a stop. Using the rotor brake might have aggravated the condition.

Inspection revealed a ruptured hydraulic hose for the main-rotor damper that had bled all fluid out of the dampers and could have led to catastrophic failure of the rotor system.

Hypoxic



by LCdr. Bob Roth

IT WAS ANOTHER HOT DAY IN THE North Arabian Gulf, and I had a break from those tiresome Operation Southern Watch flights we'd been doing for the past four months. No strike planning, no two-and-a-half-hour brief, just an enjoyable PMCF that might even turn into a day bag-ex if I was lucky (we had been having scheduled CQ lately to keep the cruise-trap counts high). But things turned out differently than I had hoped, and my aviation-physiology training really paid off.

We were flying the PMCF B profile after a high-time engine change, but a left bleed-air caution appeared soon after launch. The maintenance department found the circuit breaker popped and did everything the work package called for, but then couldn't find an electrical problem.

They concluded that the circuit breaker was weak and tripped at normal electrical loads, so they replaced it. This action sounded like treating the symptom and not the disease, but I trusted the expertise of the maintenance department and pressed on with the flight after a PMCF brief from QA.

As I launched, I was ready for the meat of the flight—the engine checks. The engine crossbleed-start checks had gone fine on deck, so I was sure the restarts would go as well in the air.

Climbing out, I saw no sign of the left bleed-off caution. The high-altitude throttle transients and supersonic MRT-RPM lockup checks were uneventful.

As I prepared to do the three different types of restarts beginning at 18,000 feet (spooldown, windmill, and crossbleed), I wondered for an instant if the Air Boss would be in a kindly mood today and call me down into the pattern when I checked in overhead, FCF complete.

The spooldown and windmill restarts on both engines were by-the-book, and I continued with checks for the crossbleed and trailing-edge flaps. I had always considered the crossbleed checks one of the most precarious points of the PMCF checklist because you are at the lowest, slowest (approximately 200 KCAS) point in the profile with only one engine on line. If things go bad, you have no extra airspeed to use, and you lose altitude quickly if you are forced to nose it over to maintain airspeed.

The left-engine shutdown and crossbleed restart went fine, but when I completed the trailing-edge flap check and started the right-engine crossbleed, the first problem occurred.

Checkflight

> ...in an instant, I was sucking on a vacuum in my oxygen mask.

Along with the sudden quiet in the cockpit, an L BLEED OFF caution showed up and in an instant, I was sucking on a vacuum in my oxygen mask. Since the oxygen is generated onboard from engine bleed-air as soon as the left bleed system shut off I had no more bleed air because the right engine was shut down. I've never been much for flying with my mask off except for occasionally wiping my face. But when I could no longer breathe, my first reaction was to rip off the mask.

I had several cautions stacking up on the DDI now and most were because the right engine was shut down (R BOOST LO, R GEN, R BLEED OFF, HYD 2A, and HYD 2B). My first thought was to make sure I didn't let my airspeed get out of control. I went to full military power on the left engine and began a very slow climb. If I couldn't restart the engine after a crossbleed attempt, I planned to windmill it. I reasoned that I would have to climb, because when it came time to get the necessary airspeed for restart, I would need the potential energy of the extra altitude.

Then I focused on making sure I could explain all the cautions. An FCS (flight-control system) caution had shown up because the switching valve for the starboard leading-edge flap stayed in test too long. An L BLEED OFF caution also appeared.

I started feeling light-headed, and then it hit me! I'd felt this way before, and I knew exactly what was happening: I was getting hypoxic.

I hesitated before resetting the flight controls, which can make matters worse if the hydraulic system has failed. In this case, the hydraulic cautions were there because the right engine was shut down. The FCS reset cleared the caution. I then cycled the bleed-air control valve to see if I could get the left bleed-air back—no luck.

It was clear that the left bleed-air problem was not fixed by the circuit-breaker change, and I would not be able to crossbleed the right engine for restart. In the name of crew coordination, I switched to departure control and asked to speak to a rep from the squadron. It never hurts to have someone read the full NATOPS procedures.

I was no longer excited about this unexpected turn of events during a PMCF, but I felt cold, which was unusual considering that during the past months, the ECS systems had been struggling to keep up with the Arabian Gulf temperatures. It had been impossible to man a jet and launch without being soaked in sweat.

I started feeling light-headed, and then it hit me! I'd felt this way before, and I knew exactly what was happening: I was getting hypoxic. What an idiot! I had been flying around in an unpressurized cockpit with my mask off for the last 10 minutes, and I was now at nearly 20,000 feet.

I whipped on my mask and pulled the emergency-oxygen green ring. About that time the XO came on the radio, and I hurriedly explained the problem and what my plan was. I even blurted out that I had felt a little hypoxic but now was feeling much better. He agreed with my plan.

I nosed the jet over and got to 420 KCAS, which gave me 12 percent rpm, just enough for ignition, and the right engine restarted.

I recovered (no extra traps today). Troubleshooters found shorted wiring to the primary bleed-air control valve.

When I read the ADB, I didn't consider what the reappearance of that L BLEED OFF caution at the most inopportune time would mean. If I had thought about that beforehand, I might have been more prepared and might have considered the loss of all bleed air and its effect on my oxygen supply. Maybe then I would have left the mask on and pulled the emergency-oxygen green ring right away.

I also debated whether climbing to altitude was necessary. It may have been better to stay lower and take advantage of the greater density for the restart. One thing was sure: When I started feeling cold and light-headed, I recognized the way I had felt when I was in the altitude chamber during my aviation-physiology training. I wonder how close I was to losing my ability to fly the airplane and make reasonable decisions.

LCdr. Roth flies with VFA-136.

I Landed Like This Once Already!

by LCdr. Brian A. Fazzone

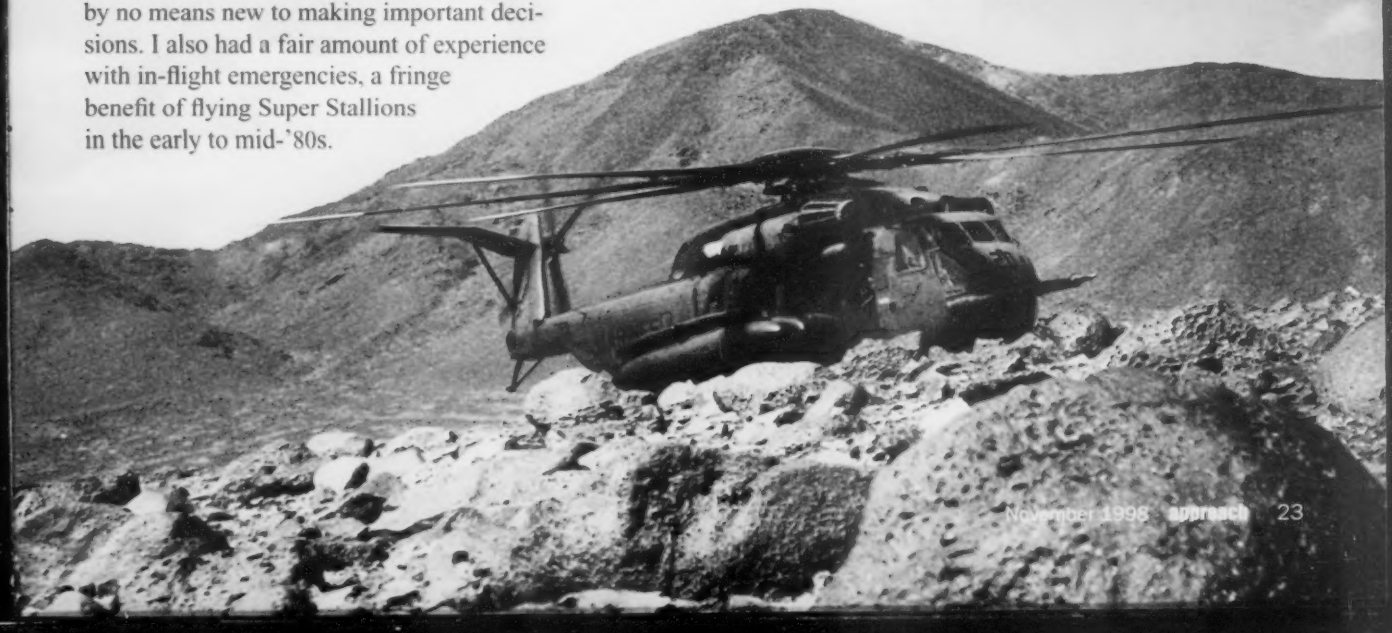
WHILE PART OF A TWO-AIRCRAFT flyon, I experienced a situation every HAC hates—the "land as soon as possible" emergency. It's not the emergency itself that causes anxiety, but the thought of putting an aircraft down in a place other than your intended point of landing, especially if you know that action will become an international incident. Although I'd had more than my share of emergencies (mostly while flying the CH-53E), I'd had to put the aircraft down in an "unintended" landing zone only one other time. Both precautionary landings were successful, but that is where the similarity ends.

The first time, I was a newly frocked captain in the Marine Corps, recently designated a CH-53E HAC. I had flown a number of missions as a HAC by that time, so I was by no means new to making important decisions. I also had a fair amount of experience with in-flight emergencies, a fringe benefit of flying Super Stallions in the early to mid-'80s.

We had launched out of MCAS Tustin on a logistics flight to MCAS Yuma. It was to be a section low-level with navigation training through the California-Arizona desert. The section leader was a senior O-4.

All was going well until I noticed the first of a series of main-gearbox (MGB) chip lights. These chip indications were frequent in 53Es because of the type of shims used in their massive transmission modules. Nine out of ten times the indication was caused by shim stock. We could clear the problem simply by resetting the circuit breaker and letting the fuzz-burn-off feature do its thing.

We handled the first indication in accordance with NATOPS. There were no secondary indications of a malfunction, so we reset the circuit breaker, cleared the caution light,



told the lead aircraft, and continued the flight. We were about 20 miles from Yuma over flat desert terrain. Finding a place to land was not a concern. About five minutes and three miles later, another MGB chip light came on. Again, we reset the circuit breaker, and again the light went out.

We saw the third chip light eight miles from the runway, again with no secondary indications. Even though there were no secondaries, I was becoming skeptical about the shim-stock theory. My crew chief was concerned but wanted to continuing the flight. I told the section leader about my situation, saying I might have to make a precautionary landing to pull the chip detector and check for metallic particles. Tongue in cheek, he noted that the airfield was just seven miles away, but he would support any decision I would make.

At five miles, the MGB chip light illuminated again with no secondaries. Transmission-oil temperature and pressure were steady and normal with no unusual noise or vibrations, but this time, the light would not clear by resetting the circuit breaker.

Secondary indication or not, something was on my chip detector that was too big to burn or wash off. I told my section leader that I was going in for a precautionary landing at a clear site in the desert, less than three miles from touchdown. Obviously not thrilled with my decision, he rogered, orbited until we were safe on deck, and notified MCAS Yuma search-and-rescue before breaking off to land.

After an uneventful landing, we pulled the chip detector to discover—you guessed it—a shim stock. But this piece was three inches long. After cleaning off the metal particles, we reinstalled the detector, started up, did a penalty turn and hover, and headed to Yuma.

Of course, a few of my squadronmates ribbed me about this incident, but only for a short time. A couple of months later, another young HAC in our sister squadron put his aircraft into a farmer's field less than 200 yards short of the runway threshold at MCAS Tustin. He had heard a loud thump in his transmission on short final. After shutdown, he learned that his Bull Gear (a component of the MGB) had a catastrophic failure.

The Sikorsky tech rep told the squadron CO a few days later that the crippled aircraft had, at best, another 30 seconds before it would have broken up in flight. Had he tried, that HAC and his crew never would have made it to the runway. Nobody ribbed him.

When I made my second precautionary landing—10 years later—I was a seasoned SH-60B HAC with well over a thousand hours in model. As the det OinC, I was leading a section of SH-60Bs out of NAF Atsugi to a ship, via MCAS Iwakuni. Thirty-five miles from Iwakuni, the intermediate transmission-oil-temperature light illuminated. I watched for abnormal vibrations, but there were none. I told my playmate and instructed him to go high boy, notify Iwakuni Approach, look for a suitable landing site, and give me vectors to the nearest airfield.

I then told my copilot to pull out the NATOPS and double-check the emergency procedure while I prepared the aircraft for an autorotation. Knowing we had to land as soon as possible, I quickly realized that my current location was not the best place to be: over the Inland Sea and a chain of mountainous islands, with rice paddies occupying what little flat land there was. I was split between MCAS Iwakuni and a Japanese airfield to the south. Both were at least 20 minutes away—an eternity in this situation.

With no way of verifying if the caution light was a sensor malfunction and not an actual overtemp condition, I decided to make a precautionary landing. Given the extensive media attention to a similar landing by another member of my squadron, my decision was much more difficult than my first land-as-soon-as-possible emergency 10 years earlier. By this time, my playmate at high boy was making a number of recommendations.

At his altitude, he could spot possibilities much more quickly than I could. Unfortunately, after viewing the LZs at my altitude, those initial recommendations were either unsafe or would prove to be logistical nightmares. The first LZs, which from 2,000 feet looked like farmers' fields, proved to be rice paddies. I considered these as land-immediately sites only, because the helo would be extensively damaged. The third recommendation sounded like it might work. It was a concrete parking lot that appeared large from 2,000 feet.

As I came up on it, I noticed that it was actually a concrete landing pad with two large davits, a very large dredging scoop, more than 20 automobiles, and a bicycle. Fortunately, there were no civilians. My extensive experience with confined-area landings would come in handy.

With no other site remotely available and the minutes ticking off, I landed without damaging anything. The resulting foreign media frenzy and local response is a story in itself.

In both cases, the decision to land when and where I did was difficult, but NATOPS and common sense were very clear as to which course of action was right in both cases.

LCdr. Fazzone flew with HSL-51. He is currently assigned to CNO's staff as the Y2K action officer.

Given the extensive media attention to a similar landing by another member of my squadron, my decision was much more difficult than my first land-as-soon-as-possible emergency...

Deep

We had landed a heavy jet on a wet runway with a tailwind.

by Cdr. Danny E. Mason

WHEN I ARRIVED FOR THE FCF, I found ECMO 1 copying the weather and the pilot discussing the aircraft's status with the SDO. I was in the back seat for this flight so I listened to the discussion about the jet. The aircraft required an FCF D because the CADT, a key element of the Prowler's attitude reference system, had been replaced.

The weather at the time of the brief was cloudy with intermittent rain. The forecast

Wheel-in the Mud

was for the storm front to blow through and the weather to clear during the afternoon. The weather was clearing to the west. We could see the Olympic Mountains from the ready room window.

We planned to go VFR to Smith Island, check out the attitude reference and return. After reviewing the big picture, we briefed specific details on aircraft configuration, communications, navigation, and EPs. The aircraft carried three pods, two drops and 13,000 pounds of fuel—a gross weight of 49K. We also noted that the wet runway would increase the braking distance.

We preflighted during a sprinkle, giving the jet a good check. We climbed into the aircraft and started the engines just as it began to rain in earnest.

As we were finishing the pre-takeoff checks, the weather cleared and the rain stopped. ATIS reported calm winds, so we asked to taxi to runway 25 for takeoff. When

ground called with the winds, the controller said we should use runway 31. We amended our request, taxied, received takeoff clearance and positioned the aircraft on that runway.

The FCF checklist calls for a throttle stagger—check on the runway. When the pilot brought both throttles to MRT, the brakes would not hold, and the aircraft canted to the left. We reduced the power, made a 360-degree turn and re-positioned on the runway. This time, the pilot said he would check the throttle stagger on the takeoff roll.

We completed the FCF and ran through the descent checklist with 10,000 pounds remaining. After we finished the checklist, I deselected the No. 2 radio and called base on the No. 1 radio to tell the SDO we had completed the FCF. I re-selected the No. 2 radio as we approached the initial for runway 7. I thought it odd that we had taken off on runway 31 just a few minutes earlier and were now landing on runway 7. The winds had been shifting around as the front moved through, and the field cleared up. Because the winds were light and variable, I thought tower was using both runways for noise abatement.

In the break, I noticed that the wind sock on runway 13 was indicating the wind at 310 and about 10 knots. I told the pilot we might have a bit of a crosswind. During the landing checks, ECMO 1 reminded the pilot that we had to make a minimum rate-of-descent landing because with 10K of fuel in the aircraft, we were heavy. ECMO 1 called the approach speed about 132 KIAS. The pilot acknowledged these calls.

At the 135, ECMO 1 called tower with the gear and requested a full stop. The pilot flew the ball to touchdown and flared. Upon landing, the flaperon pop-ups worked normally, and the pilot stated that the brakes worked. We used aerobraking until about the 5-board, when the nose fell through, and the pilot started using wheel braking. I could feel the anti-skid working as the brakes grabbed and released.

Just before the intersection, ECMO 1 asked the pilot how the braking action was. The pilot replied it was poor.

With about 4,000 feet remaining, just past the runway intersection, the pilot told ECMO 1 that he needed the hook. I believe he said, "Get the hook." Then at about the 3-board, the pilot asked ECMO 1 if he had gotten it. I am sure that the pilot asked ECMO 1 for the hook twice. During this time, I felt that the pilot was busy trying keep the aircraft on runway centerline.

As we went by the arresting gear, I was surprised when we didn't grab the wire. I thought we had boltered. The pilot then asked ECMO 1 if he had dropped the hook, ECMO 1 said that he did not think the pilot wanted the hook. At that point, someone dropped the hook.

We passed the hold-short area of runway 25, and ECMO 1 called for the pilot to secure the engines so we would not FOD them as we left the runway. The pilot shut down both engines as we trundled into the overrun.

After we came to a stop and climbed out, I noticed the wind sock on the approach end of runway 25 indicating the winds were 250 at 10-15 knots. We had landed a heavy jet on a wet runway with a tailwind. Since we did not get the hook down in time to catch the long-field gear, our 46,000-pound aircraft was wheel-deep in the mud.

Since we did not get the hook down in time to catch the long-field gear, our 46,000-pound aircraft was wheel-deep in the mud.

Here are some of the things I could have done from the back seat that would have prevented this Class B mishap:

I should have directed the crew to dump fuel before landing. There was no reason not to dump the fuel to get the aircraft as light as possible.

After noticing the wind sock, I should have asked the tower about the winds. If we had just taken off from runway 31, why were we now landing on runway 7? I should have been much more assertive and determined what the correct runway should have been.

I should have ensured that we had discussed heavy-gross-weight landings much more thoroughly in the brief.

We made other errors as well. The obvious one was the confusion over who was going to drop the hook. We had discussed that in the brief but obviously we had not been clear on whose responsibility it was.

Here are several more lessons learned.

When making a full stop, particularly with a wet runway, use all the available runway. We flew the ball to touchdown and used up nearly 1,000 feet of the 8,000-foot runway.

NFOs must have normal deceleration-speed checks. We have acceleration checks for takeoff. Pilots are trained to double the runway remaining to determine the speeds, i.e., 100 knots at the 5-board, 80 knots at the 4-board. If you are not decelerating at these rates, you need the hook.

Use the hook. On the landing rollout, once someone in the cockpit says, "Hook," drop it! You don't have anything to lose.

Don't trust tower to put you on the runway that is most appropriate for your aircraft configuration. You must be aware of the weather conditions and land and take off with the best winds.

A little aside. The C-9 that returned me to Whidbey from my FNFOB with CNAP departed on runway 11. When we took the runway, I noticed the wind sock. The winds were on the tail at about 10 knots. We used 7,000 feet of the 8,000-foot runway.

Cdr. Mason is the CO of VAQ-131.

Comm Free-for-All continued from pg. 13.

Of course, the SDO had to immediately jump into the fray and confirm that their gear was in fact not down and that no, they had not gotten to the "blow down" step yet.

Approach control continued to interrogate the crew about their intentions, fearing that this was going to close down the field for a time and that other local flights might be forced to divert. The crew was soon ready to try blowing down the right main. We hung on their wing—assured that we would momentarily see opening gear doors.

As the wings gave a little rock, we could almost see the pilot pulling hard on the gear handle. Uh-oh, nothing! Not even a hint of movement on the right side. As my right-seater gave them the bad news, things on squadron common got very busy.

All this time, troubleshooting in a dirty configuration had cost fuel. Realizing it was time for them to set up for a gear-up landing, we detached as they turned back toward home field. Once again, the SDO wanted to know exactly what they had done and were planning to do. The LSO at the outlying field wanted to brief them on main-gear-up landing procedures, which were also covered in the checklist. Some more questions from approach control, and suddenly the XO, who had gotten to the ready room by this point, was on the radio with more questions and advice straight from the checklist. Finally, another squadron LSO was out at the duty runway voicing his concerns and giving advice.

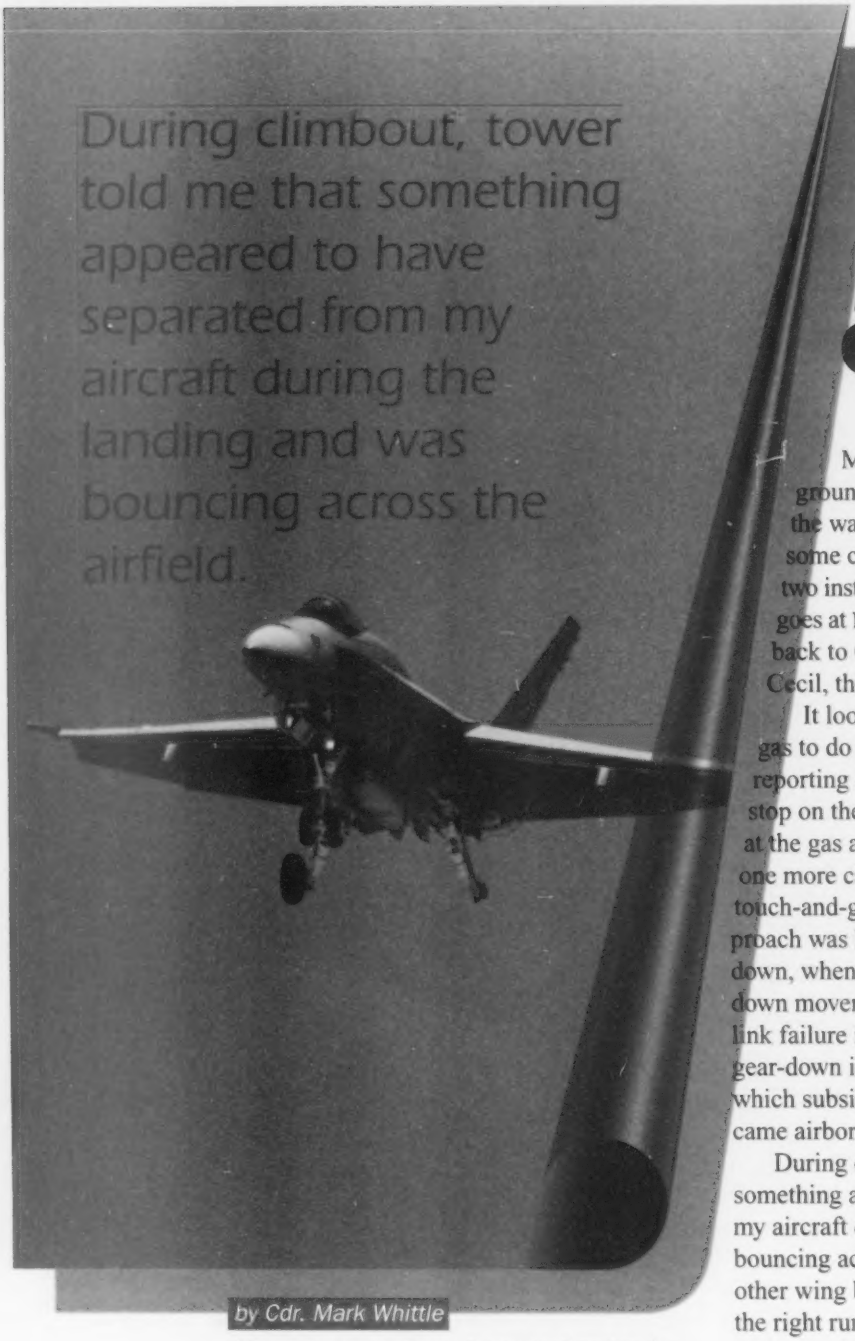
As we orbited safely overhead, we began to regret the comm free-for-all we had started. The crew landed their jet safely, but I am convinced the many concerns we all voiced over the radio only slowed a competent crew's progress through a difficult checklist.

When we brief formation flight for an aircraft with a problem, the good aircraft is always tasked with joining up loosely and providing any help. They are not to try jumping into the other jet, so to speak, to figure out a problem for its crew. I believe anyone involved with an airborne emergency, whether it's the wingman, SDO, or LSO, should observe the same common-sense rule.

"Stand by" means exactly that!

LCdr. Haugen flies with VAQ-131.

Two and


During climbout, tower told me that something appeared to have separated from my aircraft during the landing and was bouncing across the airfield.

by Cdr. Mark Whittle

IT WAS A BEAUTIFUL, FLORIDA October day when I began what turned out to be a not so routine air-combat maneuvering (ACM) and instrument warm-up sortie. As the wing operations officer, I was, like most staffers, always struggling to maintain tactical proficiency, savoring every opportunity to fly.

My preflight planning, briefing, ground operations, and flight out to the warning area went fine. Following some classic ACM warm-ups, I made two instrument approaches to touch-and-goes at NOB Mayport before heading back to Cecil. I shot another approach at Cecil, then reentered for the break.

It looked like I would not have the gas to do any more touch-and-goes. After reporting abeam with the gear for a full stop on the left runway, I took one last look at the gas and decided I could squeeze in one more circuit. I changed my request for a touch-and-go with tower at the 90. The approach was ho-hum all the way to touchdown, when I noticed an unusual left-wing down movement with an associated planing-link failure indication (flashing left-main-gear-down indication with warning tone), which subsided immediately after the jet became airborne again.

During climbout, tower told me that something appeared to have separated from my aircraft during the landing and was bouncing across the airfield. Fortunately, another wing bud was rolling for a takeoff on the right runway. As I had made my touch-and-go to his left, he also noticed something separate from my Hornet but thought I had hit a bird.

He joined up and reported my left wheel was missing. I didn't have a lot of gas to sort this one out. As my unplanned wingee and I arced around the field, he noted that only the

Wheels No Gas

wheel was missing. The rest of the strut was intact. We broke out the pocket check list (PCL) and talked about landing options with the duty officer on our base frequency backing us up. We discussed getting the short-field gear pulled and trying to get an LSO on station, but we had no time.

Approaching wide abeam for the second time following the fateful touch-and-go, I decided I had to land this pass or risk flaming out. The left feed tank showed 400 pounds, the right feed tank 600 pounds. SOP emergency fuel was 1,500 pounds total. Not good. Only one pass, maybe two, available, and I'd be in the chute talking to the alligators in the local swamp. The good news was that less gas meant less chance of fire, or so I hoped.

I couldn't wait for paddles. I had to land beyond the short-field gear, on the right side of the runway, in a power-on flare. I also had to keep the bad strut off the deck as long as possible while getting the nose on the deck so that I could use nosewheel steering. I would need full right stick to hold the left wing up, which would tend to induce right drift without nosewheel steering to counter. As soon as the left strut started to drag, I wanted to keep tracking straight enough to stop before exiting the runway to the left.

The possibility of the left strut grabbing violently enough to flip the jet on its back, causing me to lose my head (as had happened to a few other Hornet pilots) was something I quickly put out of my mind.

My approach was lower and flatter than normal. My reluctance to allow the jet to touch down was quickly replaced with an even greater fear of running out of runway while trying to finesse the landing. Yet, as I skidded to a halt, my unusual game plan had worked dang-near perfectly.

It turned out that the left-wheel axle was deeply corroded, at the point where it meets the wheel but the corrosion was not visible. It was just a matter of time before the axle failed. Had I not forced the issue, the next guy most likely would have, and it may not have turned out as well.

Don't let your zeal to maximize training make you press the gas and leave yourself with few options if things get ugly. You never know when things are going to deteriorate. Always save some gas for the unexpected, even in the pattern at home base.

Another lesson is that sometimes it's better to be lucky than good. Had I stuck with my original full-stop plan, I might not be alive to write this article. If I hadn't had a wingman to tell me I had one wheel, I might have tried a normal landing, which would have probably resulted in disaster.

Trying to flip through a PCL while you're low, dirty and slow is no picnic. Practice handling emergencies like this on the ground, in the safety of your recliner, before you face one for real.

Cdr. Whittle is a former VT-25 SERGRAD. He flew with VFA-87, VX-4, and VFA-204. He is now the CO of VFC-13.

An Ice Tail

by LCdr. Bill Mosk

IT WAS THE MIDDLE OF WINTER, and we were deployed to Keflavik. My crew had an all-night burner scheduled to support a Norwegian frigate against a Norwegian ULA-Class submarine. A big front had passed Kef the day before, moving north-northeast into our op area, which was 20 miles off the coast of Norway. We faced a two-and-a-half-hour flight to the op area, and a three-hour flight home because of high winds. The on-station period was scheduled for four hours. Before takeoff, our tasking changed because the frigate wouldn't make it. We guessed the sea state was too high for it to leave port.

Our job was to track the snorkeling diesel sub for the first two hours using the infrared detecting system (IRDS), followed by a two-hour freeplay period where we could get our ASW qual.

During our flight to the area, we wondered how anxious the sub would be to snorkel in 20-foot waves. How would conditions affect our mission?

We encountered IMC an hour into the flight. We turned on the engine anti-ice systems and started watching the gas. Reaching the op area, we were under positive control with Stavanger Radar in controlled airspace. We started our descent, looking to break out into VMC. Our initial rendezvous point with the sub was in an area with oil rigs and constant helicopter traffic.

We descended to 1,000 feet and were still in the goo. We asked for a lower altitude, but Stavanger said they couldn't provide radar service below that height.

Meanwhile, we had contacted the submarine and as expected, they were reluctant to stay longer than they had to on the surface. We needed to get below the cloud layer, so we looked for a hole. It was dark, and we

were in heavy icing conditions. All our anti-ice and de-ice systems were on.

The fact we were in controlled airspace prevented us from going "due regard" and punching through to 300 feet. Besides, it wasn't safe with the helo traffic beneath us.

Stavanger Radar suggested we shoot an approach into Bergen and, once clear, turn west and remain VFR below.

As we set up for an ILS approach to runway 17, I studied the plate. I wanted to avoid the mountains. The approach plate showed a 1,200-foot peak 10 miles northwest and a 1,400-foot peak due west of the field. I called for the nav's terrain chart and verified there were other high-terrain areas stretching southwest to northwest of the field.

I asked the controllers what the observed ceiling was at Bergen. They told me it was 1,000 feet. Based on my experience with ILS approaches, I assumed we wouldn't break out until probably three miles north of the field at best. All this, coupled with the darkness and the fact that none of the flight-station crew had ever been to Bergen, made me uneasy.

At 13 miles and 3,000 feet, I asked to break off the approach, head back west, and take my chance breaking out VFR over the water at 1,000 feet.

About the same time, we got an indication of an empennage-de-ice fault. We found that the parting-strip circuit breaker had popped. Although we reset it, we got another fault; the CB had popped again.

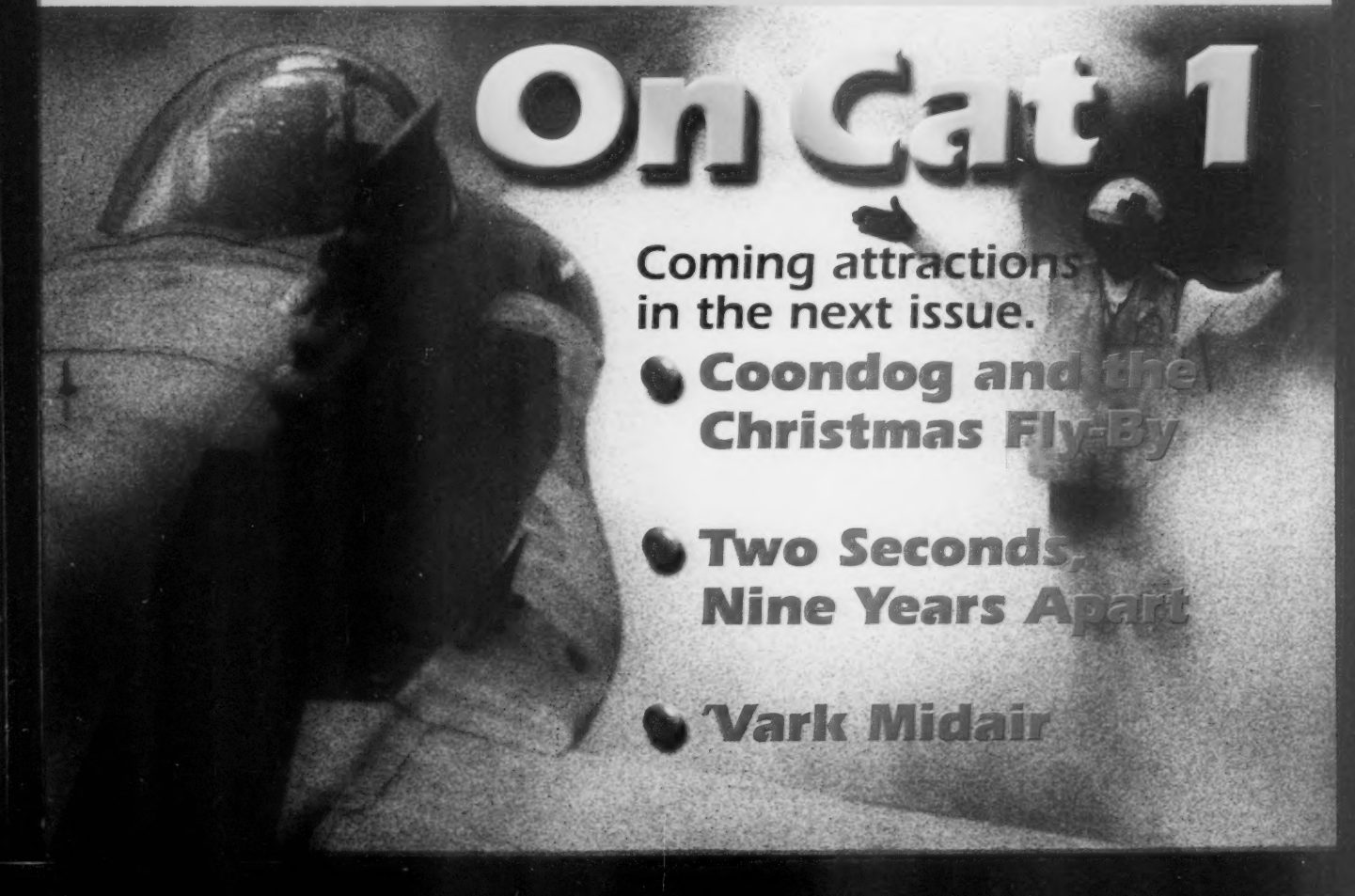
At this point, the target had gone sinker, and we couldn't find a hole to penetrate. Our tail de-ice wasn't working either.

I decided to climb to get out of the icing area and save gas. Eventually, we found a VMC pocket between 6,000 and 7,000 feet. The FEs decided to check for possible damage to the tail. They plugged the Aldis lamp into the aft observer's electrical outlet and shined the light on the horizontal stabilizers. Sure enough, there was a burn hole on the starboard leading edge. Time to abort.

We made it back to Keflavik where a postflight check revealed a good-sized hole melted into the stab.

If things don't feel right, chances are they aren't. This flight reinforced the fact that flights don't always go as planned, and crews must be ready to handle the changes.

LCdr. Mosk flies with VP-10.



An Ice Tail

by LCdr. Bill Mosk

IT WAS THE MIDDLE OF WINTER, and we were deployed to Keflavik. My crew had an all-night burner scheduled to support a Norwegian frigate against a Norwegian ULA-Class submarine. A big front had passed Kef the day before, moving north-northeast into our op area, which was 20 miles off the coast of Norway. We faced a two-and-a-half-hour flight to the op area, and a three-hour flight home because of high winds. The on-station period was scheduled for four hours. Before takeoff, our tasking changed because the frigate wouldn't make it. We guessed the sea state was too high for it to leave port.

Our job was to track the snorkeling diesel sub for the first two hours using the infrared detecting system (IRDS), followed by a two-hour freeplay period where we could get our ASW qual.

During our flight to the area, we wondered how anxious the sub would be to snorkel in 20-foot waves. How would conditions affect our mission?

We encountered IMC an hour into the flight. We turned on the engine anti-ice systems and started watching the gas. Reaching the op area, we were under positive control with Stavanger Radar in controlled airspace. We started our descent, looking to break out into VMC. Our initial rendezvous point with the sub was in an area with oil rigs and constant helicopter traffic.

We descended to 1,000 feet and were still in the goo. We asked for a lower altitude, but Stavanger said they couldn't provide radar service below that height.

Meanwhile, we had contacted the submarine and as expected, they were reluctant to stay longer than they had to on the surface. We needed to get below the cloud layer, so we looked for a hole. It was dark, and we

were in heavy icing conditions. All our anti-ice and de-ice systems were on.

The fact we were in controlled airspace prevented us from going "due regard" and punching through to 300 feet. Besides, it wasn't safe with the helo traffic beneath us.

Stavanger Radar suggested we shoot an approach into Bergen and, once clear, turn west and remain VFR below.

As we set up for an ILS approach to runway 17, I studied the plate. I wanted to avoid the mountains. The approach plate showed a 1,200-foot peak 10 miles northwest and a 1,400-foot peak due west of the field. I called for the nav's terrain chart and verified there were other high-terrain areas stretching southwest to northwest of the field.

I asked the controllers what the observed ceiling was at Bergen. They told me it was 1,000 feet. Based on my experience with ILS approaches, I assumed we wouldn't break out until probably three miles north of the field at best. All this, coupled with the darkness and the fact that none of the flight-station crew had ever been to Bergen, made me uneasy.

At 13 miles and 3,000 feet, I asked to break off the approach, head back west, and take my chance breaking out VFR over the water at 1,000 feet.

About the same time, we got an indication of an empennage-de-ice fault. We found that the parting-strip circuit breaker had popped. Although we reset it, we got another fault; the CB had popped again.

At this point, the target had gone sinker, and we couldn't find a hole to penetrate. Our tail de-ice wasn't working either.

I decided to climb to get out of the icing area and save gas. Eventually, we found a VMC pocket between 6,000 and 7,000 feet. The FEs decided to check for possible damage to the tail. They plugged the Aldis lamp into the aft observer's electrical outlet and shined the light on the horizontal stabilizers. Sure enough, there was a burn hole on the starboard leading edge. Time to abort.

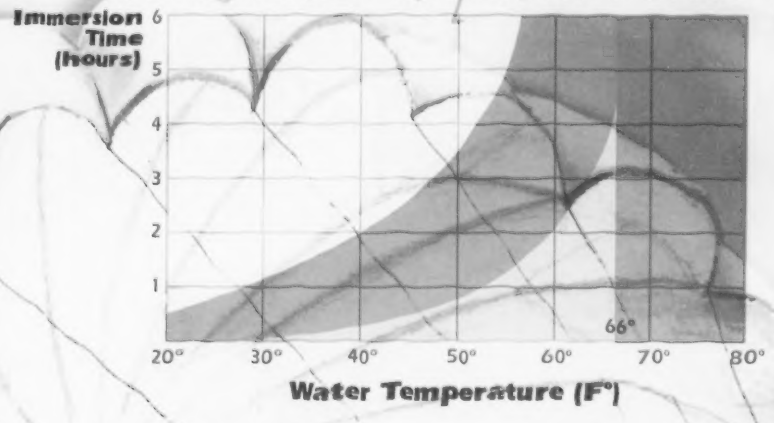
We made it back to Keflavik where a postflight check revealed a good-sized hole melted into the stab.

If things don't feel right, chances are they aren't. This flight reinforced the fact that flights don't always go as planned, and crews must be ready to handle the changes.

LCdr. Mosk flies with VP-10.

Cold-Water Survival

without anti-exposure suit



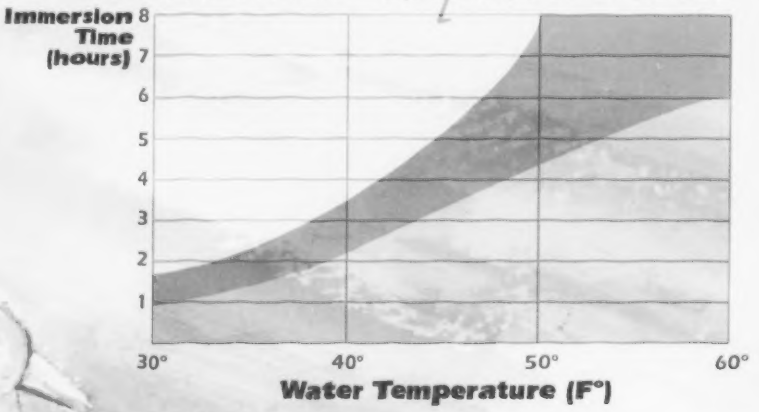
Lethal 100 percent expectancy of death

Marginal 50 percent expectancy of unconsciousness, which will probably result in drowning

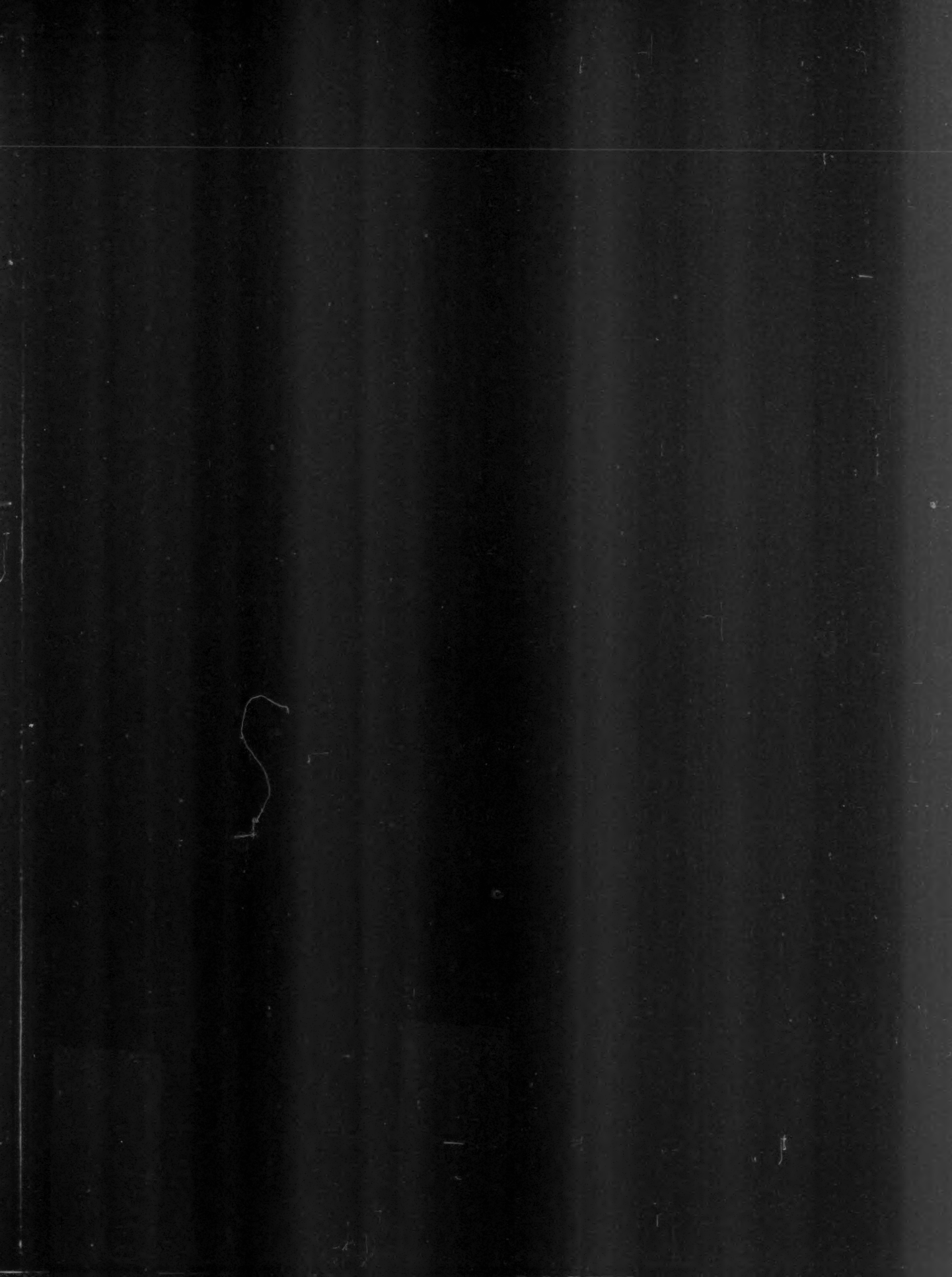
Safe Zone

Shark Attack Hazard

with anti-exposure suit



Great Danger

Marginal

Safe Zone